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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/619,665	07/19/2000	Shigeto Kamata	684.3049	2162

5514 7590 08/27/2002

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EXAMINER

MULLINS, BURTON S

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 08/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/619,665

Applicant(s)

KAMATA ET AL.

Examiner

Burton S. Mullins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 1 and 6-8 recitation “wherein the coil is supported by a recessed portion” is indefinite. It is not clear how the recessed portion formed on the jacket 14’ (Fig.3, 5&7) “supports” the coil 1a/1b since it does not appear that the recessed portion comes in contact with the coil, at least not in what appears to be the inside “recess.” Similarly, the recitation in claim 20 “wherein the coil is supported by a recessed portion of the coil holding member” is indefinite. It appears that the inside recessed portions formed on the jacket 14’ serve to “accommodate the opposite ends of the bent coils” (p.15, lines 25-27). This is different from “supporting” the coils.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C.

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122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-3, 5-9, 11-15 and 17-26, as best understood, are rejected under 35 U.S.C. 102(e) as being anticipated by Kamata et al. (US 6,084,319). Kamata teaches a linear motor comprising a magnet 41a (Fig.3); a coil 42a; and a jacket 42b (Fig.4) or jacket covers 14/14' (Figs.8-13) having an inside including "reinforcement" members 8/8a/8b (Figs.5,8,10-12) that form a "comb-shaped" (Fig.13) and having teeth (also formed by the reinforcement members 8; Figs.10-13), extending along a driving direction (Figs.12-13), wherein a cooling medium flows through an inside space enclosed by the jacket (c.5, lines 57-65; Fig.4), and wherein the coil 1 (Figs.11&13) is supported by a recessed portion (not numbered, see Figs.11&13) of the comb-shaped jacket 14/14' and is held fixed, with respect to the driving direction, by being sandwiched by protruded portions of the comb-shaped member, i.e., "reinforcement members 8/8a/8b in Figs. 8-12), with the members 8/8a/8b of the comb-shaped jacket member 14/14' disposed on at least an outside periphery of the coil, as seen in the various embodiments of Figs.11&13).

Regarding claim 2, note the pillars (Figs.11&13) holding the coils so that it "floats" above sections of the jacket member 14/14'.

Regarding claim 3, note partially-overlapped coils of the embodiments in Figs.15-16 (c.11, line 24+).

Regarding claim 5, the jacket serves as a guide since the movable element 41 (Fig.2) moves relative to the jacket.

Regarding claims 6-7, 17-19 and 24-25, the device of Kamata drives a movable stage 121 of an exposure apparatus including illumination system 127 (Fig.17; c.12, lines 20+). The

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reinforcement members 8a', 8b', etc. extend parallel to the driving direction (Fig.10-12) in the sense that they are arranged one after the other in the driving direction.

Regarding claim 11, the reinforcement members 8a', 8b', etc. do not interfere with the relative motion of the magnet and coil since they are inside the jacket.

Regarding claims 12 and 14, it is evident from Fig.8 that the reinforcement members 8a', 8b', etc. may be made of the same material as the jacket, i.e., ceramics or a resin (c.2, line 66-c.3, line 1; c.3, lines 13-15; c.7, lines 3-7).

Regarding claim 13, as evident upon comparison of Fig.5 with, e.g., Figs.10-11, the integral reinforcement members comprise protruded shapes adjacent a portion of the jacket where the magnets and coil oppose one another.

Regarding claim 15, as seen in the embodiment of Fig.10, a fixing means 7 spaces the coil 1 from the jacket and integral reinforcement members.

Regarding claims 8, 19 and 26, the method of applying photosensitive material to a substrate, exposing the substrate using the movable stage, and developing the exposed substrate is taught at c.12, line 59-c.13, line 23 (Figs.17-19).

Regarding claim 20, Kamata teaches a linear motor including magnets 3 (Fig.5) and coil holder or "jacket" 14 (Fig.10) formed in a comb-shape and having plural protrusions 8a/8b/8c formed along a direction of relative movement between the magnet and coil (Figs.12-13&15-16).

Allowable Subject Matter

4. Claims 4, 10 and 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the

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limitations of the base claim and any intervening claims. The prior art does not teach a jacket with a central portion of small thickness and a recessed portion on the outside of the jacket which reinforces the central portion, with bent end portion of the coils disposed at the recessed portion (claim 4); or a reinforcement portion on the outside face of the jacket which extends parallel to the driving direction (claim 10); or a recessed portion on at least the upper or lower half of a section of the jacket when viewed in cross-section (claim 16).

Response to Arguments

5. Applicant's arguments filed 2-19-02 have been fully considered but they are not persuasive. Applicant supplies no argument other than stating that Kamata does not teach a linear motor whose coil is attached to a jacket while being sandwiched by a comb-shaped member of the jacket with respect to the driving direction, wherein the coil is supported by a recessed portion of the comb-shaped member and is held fixed by being sandwiched by protruded portions of the comb-shaped member, the protruded portions disposed at least along an outside periphery of the coil.

As set forth in detail in the rejection above, the examiner notes that in fact Kamata appears to teach a linear motor whose coil 1 (Fig. 10) is attached to a jacket (14/14') while being sandwiched by a comb-shaped member comprising reinforcement members 8a', 8b', etc. (Figs. 12-13&15-16) integral with the jacket and arranged in a row parallel with respect to the driving direction (Figs. 12&15), and with the added features of a "recessed portion" (not numbered) shown in Figs. 11&13 and comprising a notch in the reinforcement members on which the coil 1 partially abuts. While the "recessed portion" in Kamata does not correspond to

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the end turn shape of the coil as in applicant's invention (see Figs.3, 5&7), this limitation is not read into the claim from the specification. Further, the reinforcement members 8a-8c of Kamata clearly sandwich the coils 1a-1c and are disposed along an outside periphery of the coils (Figs.11, 13&15).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 305-7063. The examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 305-1341 for regular communications and 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0956.



Burton S. Mullins
Primary Examiner
Art Unit 2834

bsm
August 25, 2002